UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAR 2 6 2014

REPLY TO THE ATTENTION OF:

E-19J

Brian Elkington
U.S. Fish and Wildlife Service
5600 American Boulevard West
Bloomington, Minnesota 55437

RE: Draft Environmental Impact Statement: Ballville Dam Project – Sandusky County, Ohio

Dear Mr. Elkington:

The U.S. Environmental Protection Agency (USEPA) has reviewed the Draft Environmental Impact Statement (Draft EIS) for the Ballville Dam Project located in Sandusky County, Ohio. This letter provides our comments on the Draft EIS, pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act.

The Ballville Dam is located approximately 18 river miles upstream of Lake Erie, in Ballville Township, upstream of the City of Fremont, in Sandusky County, Ohio. Its location falls within a 70-mile stretch of the Sandusky River, designated as one of 10 reaches of state-designated scenic river in Ohio. It was built on the Sandusky River between 1911 and 1913. Originally built as a run-of-the-river hydroelectric generation facility, it was soon abandoned as a hydroelectric facility because seasonal flow in the river was insufficient to meet power generating requirements of the plant. The City of Fremont (City) bought the land and facilities in 1959 and re-purposed the dam to provide the City's water supply. Since the purchase of the Ballville Dam by the City in 1959, the impounded area has been used as a source of public water. Due to ongoing drinking water quality violations, the Ohio Environmental Protection Agency (OEPA) ordered the City to construct an off-stream reservoir to serve as a drinking water source. As of late 2013, this new off-stream raw water reservoir, now constructed, is currently the primary source of drinking water for the City of Fremont. The Ballville Dam and the impounded area are no longer necessary as a public water supply for the City of Fremont.

Progressive deterioration of the dam and an adjacent north bank seawall has been noted in successive inspections by the Ohio Department of Natural Resources (ODNR), beginning in 1980. The last known maintenance performed on the structure occurred in 1969. The dam is currently classified by ODNR as a Class I structure; this is the highest hazard rating due to the probable loss of life if the dam were to fail during a flood event. In addition to safety issues, the Ballville Dam divides the aquatic ecology of the lower Sandusky River, altering biological functions and impacting both riparian and aquatic habitats otherwise provided by a historically-connected Sandusky River watershed. The dam represents an impassable barrier to upstream movement of all aquatic organisms

and to downstream movement of many aquatic organisms, and has altered natural hydrologic and sediment transport functions in the Sandusky River.

The Draft EIS states the project needs are to restore and expand upon self-sustaining fishery resources within the lower Sandusky River by providing fish passage in the Sandusky River at the Ballville Dam impoundment site in both the upstream and downstream directions. Project needs are also to restore system connectivity and natural hydrologic processes between the impounded area upstream of Ballville Dam and the lower Sandusky River, which would restore riverine fish and wildlife habitat, resulting in a net gain in the amount of free-flowing riverine habitat. The purposes for the issuance of Federal funds and preparation of this Draft EIS, as stated in the document, are to restore natural hydrological processes over a 40-mile stretch of the Sandusky River, re-open fish passage to 22 miles of new habitat, restore flow conditions for fish access to new habitat above the impoundment, and improve overall conditions for native fish communities in the Sandusky River system both upstream and downstream of the Ballville Dam, thereby restoring self-sustaining fish resources.

The Draft EIS evaluates alternative methods of providing fish passage upstream and downstream of the Ballville Dam location, restoring natural hydrologic and sediment transport regimes, and addressing dam safety and liability. A No-Action Alternative and three action alternatives are studied in the Draft EIS. The Proposed Action, Alternative 4, is Incremental Dam Removal with installation of an ice control structure (ICS). The Proposed Action would be divided into three phases with each phase having multiple objectives for meeting dam removal goals. In summary, the phases are: 1) the initial notching of the Ballville Dam; 2) sediment stabilization, dam removal, and ice control structure construction; and 3) sea wall modification along the north bank of the river upstream of the dam removal, and restoration of the project area. Phase 3 would also include the demolition of any remnants of Tucker Dam[1], if necessary.

Based on our analysis, USEPA's rates the Draft EIS as "**Environmental Concerns – Insufficient Information**" (**EC-2**). Please see the enclosed "Summary of Rating Definitions." USEPA recommends that the Final EIS address the following comments, which generally relate to wetland and water resource impacts, mitigation, water quality, endangered species, historic preservation, and sediment issues.

WETLAND AND WATER RESOURCE IMPACTS

- The Proposed Action will require direct impacts to 0.67 acre of wetlands and 2.34 acres of the Sandusky River, and indirect impacts to 53.90 acres of wetlands. A Section 404 permit under the Clean Water Act is required by the U.S. Army Corps of Engineers (USACE) for proposed discharges of dredged or fill materials to Waters of the United States. The Section 404 approval is contingent upon the project complying with the Section 404(b)(1) guidelines under the Clean Water Act. These guidelines are summarized as follows:
  - Least Environmentally Damaging Practicable Alternative (LEDPA)[2] – There must be no practicable alternative to the proposed discharge (impacts) which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences;

[1] The Tucker Dam was reportedly built between 1835 and 1858 and was a nine foot tall timber crib design that used water power to work a flour grist-mill. This dam and mill was reported to be operational into the early 1900's and was located within the current Ballville Dam impoundment.

[2] Furthermore, an alternative is considered practicable if "it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." [40 CFR Part 230.3]

- No Violation of Other Laws – The proposed project must not cause or contribute to violation of state water quality standards or toxic effluent standards, and must not jeopardize the continued existence of federally-listed endangered or threatened species or their critical habitat(s);
- No Significant Degradation – The project must not cause or contribute to significant degradation of Waters of the United States; and
- Minimization and Mitigation of Adverse Impacts – The project must include appropriate and practicable steps to avoid impacts to regulated Waters of the United States; where impacts are unavoidable, it must demonstrate how impacts have been minimized; and compensatory mitigation must be provided to offset unavoidable, minimized impacts to the aquatic ecosystem.

The Draft EIS did not discuss how sequencing established by the Clean Water Act Section 404(b)(1) guidelines has been applied, namely, avoidance first, then demonstration of impact minimization, then mitigation for unavoidable, minimized impacts. A discussion on proposed mitigation for unavoidable, minimized wetland impacts (both direct and indirect) was also not included in the Draft EIS.

Recommendations: The Final EIS should include additional information on the proposed mitigation for both direct and indirect wetland impacts, including mitigation ratios, mitigation type, mitigation location(s), etc. This information should align with information provided to both USACE and OEPA for Section 404 permitting and Section 401 Water Quality Certification.

- Permanent impacts to six wetlands[3] are proposed in the Draft EIS. No figures showing wetland impact locations were provided in the Draft EIS; however, the U.S. Fish and Wildlife Service (USFWS) provided additional information to USEPA via email on March 24, 2014, including wetland impact figures from the Section 404 and Rivers and Harbors Act Section 10 permit application submitted to USACE. With the exception of permanent impacts to Wetland 18 and Wetland 6 for installation of ICS piers, and temporary impacts to Wetland 18 and Wetland 19 for construction of the northern access ramp into the river, neither the Draft EIS nor the wetland impact figures clearly justify why any other permanent wetland impacts (fill) would be required to implement the Proposed Action. Many impacts descriptions state, "place soil and rock fill for channel restoration." The Draft EIS was not clear on why fill is proposed to be placed into wetlands for "channel restoration."

  Recommendations: Recommendations for the Final EIS are as follows:
  - **The Final EIS should clarify why fill into the Sandusky River is proposed for "channel restoration." Page 5-5 of the Draft EIS states, "*The Proposed Action would provide a small level of assistance in training of the river and creating a new thalweg (i.e. line of lowest elevation within a watercourse); however, the channel would determine its own course based on water volume and velocity.*" If the channel will be allowed to determine its own course, then no fill or other interceding in its finding its new course should be required.**
  - **The majority of the wetlands proposed to be permanently impacted are forested Class 3 wetlands. Due to their high quality, permanent impacts to these wetlands should be avoided to the extent required only to remove the dam and install the ICS system.**

[3] Portions of Wetland 6, 14, 15, 18, and 19, and all of Wetland 17.

- The Draft EIS states that the Proposed Action would be "self-mitigating" and that no off-site compensatory mitigation for impacts (either direct or indirect) to wetlands is expected. Direct impacts to wetlands are currently proposed to be 0.67 acre[4]; indirect impacts are proposed to be 53.90 acres[5]. Indirect wetland impacts are attributed primarily to the loss of wetland hydrology associated with the drop in water level following dam removal. In addition to wetland fill, the loss of (via indirect impacts to) over 50 acres of wetlands, primarily high quality Class 3 forested wetlands, is of significant concern to USEPA. Many wetland functions and values will be lost if these wetlands revert to upland areas. While the Draft EIS states that there is the potential for the development of new wetlands in areas currently inundated by the Ballville Dam impoundment (in the range of 23-55 acres), there is substantial uncertainty as to the quality, location, and acreage of wetlands that may actually develop post-dam removal. Furthermore, information provided in the March 2014 Section 404/Section 10 application to USACE states a prediction of 51 acres of wetland development[6] in the vicinity of the dam removal.
  Recommendations: USEPA does not concur that the Proposed Action would be self-mitigating. USEPA concurs with mitigation ratios for direct wetland impacts proposed in the Section 404/Section 10 application (2:1 for Class 2 wetland impacts and 3:1 for Class 3 wetland impacts). The Final EIS should be updated to include specific narrative information on proposed mitigation for direct wetland impacts. Additionally, USEPA recommends that USFWS continue to work with USACE to develop an acceptable mitigation ratio and mitigation plan to compensate for indirect wetland impacts that meets requirements of the 2008 Mitigation rule (40 CFR 230). Details on mitigation for indirect wetland impacts (including mitigation ratios, mitigation type, mitigation location(s), etc.), should be included in the Final EIS.

- The Draft EIS states that there is the potential for the development of new wetlands in areas currently inundated by the Ballville Dam impoundment (in the range of 23-55 acres). The March 2014 Section 404/Section 10 application predicts 51 acres of wetland development in the vicinity of the dam removal, yet then states a conservative prediction of 14.5 acres of wetland creation. While USEPA concurs that predictions regarding the exact size, location, and type of newly-formed wetlands post-dam-removal are uncertain, there are currently no substantive commitments proposed in the Draft EIS that ensure project implementation results in no net loss of wetlands.
  Recommendation: USEPA encourages additional coordination between USFWS and the wetland regulatory agencies to ensure that project implementation does not result in a net loss of wetland. The Final EIS should discuss how USFWS is in compliance with Executive Order 11990 (Protection of Wetlands).

- The Draft EIS does not clearly discuss the effect the proposed project will have on lowering the pool elevation behind the dam. Information provided to USEPA by USACE on March 24, 2014, indicates that demolition of the dam will lower the pool elevation by approximately 30 feet near the dam. Page 5-2 of the Draft EIS states, "*The upstream channel within the former pool would be expected to respond to this new elevation control with a series of adjustments such as upstream knickpoint migration, incision, and subsequent widening... until a new stable bed elevation is achieved along the length of the current impoundment.*" However, there was no real

[4] Direct impacts: 0.09 acre to Class 1 wetlands, 0.01 acre impact to Class 2 wetlands, and 0.57 acre impact to Class 3 wetlands.
[5] Indirect impacts: 0.18 acre of Modified Class 2 wetlands, 1.23 acres of Class 2 wetlands, and 52.49 acres of Class 3 wetlands.
[6] Including fringe, in-stream, or forested floodplain wetland types.

discussion in the Draft EIS about the likelihood of instability over a period of many years as the river adjusts to a new, stable channel. In the interim period, the channel may headcut, which may induce incision, wasting of banks, and channel widening. Channel instability may also contribute to erosion of the 20+ acres of exposed sediments proposed to be seeded and stabilized post-dam-removal.

Recommendation: The Final EIS should include additional information on fluvial geomorphology changes expected or possible in the new channel as it forms post-dam removal, and the potential for these fluvial processes to affect the proposed restoration efforts.

- The Proposed Action includes construction of an access ramp into the river to allow construction equipment to demolish the dam. The access ramp is "*estimated to be 7,400 CY [cubic yards] of soil, rock, and concrete rubble*." Additionally, the Draft EIS and the Draft Permitting Drawings (Appendix A, Sheet 7 of 19) did not discuss or show placement of any temporary culverts under the access ramp to allow for maintenance of river flow.

  Recommendation: USEPA supports only the use of non-sediment-producing materials to construct the temporary access ramp (i.e., no dirt). Additionally, appropriately-sized culverts should be installed in the access ramp, particularly between Stations 11+00 and 13+00. This temporary access ramp is proposed to be in place for many months, and should allow for passage of normal river flow during the time it is in place.

- Installation of the ice control structures (Phase 2C) appears to be proposed during active flow (wet conditions).

  Recommendation: USEPA recommends that construction of ice control structures be done in the dry, using temporary dewatering methods, such as cofferdams, around each proposed concrete pier.

- The Draft EIS (Phase 2E) on page 3-6 proposes "channel restoration," which would include "*placement of "28,000 CY of fill consisting of offsite rock and soil materials as well as some concrete rubble from the demolished dam and leftover access ramp. This material would be used for grading of the new bank benches."* This proposal is reiterated on page 5-9, "*The remaining clean rubble would be used with other clean fill to complete other channel restoration goals. Approximately 28,000 CY of fill would be needed to reshape and guide the river channel after dam removal and installation of the ICS.*"

  Recommendations: The Final EIS should include modifications that take into account, clarify, and otherwise provide narrative information on the following issues:
  - **What is meant by "other clean fill" on page 5-9?**
  - **What is meant by "other channel restoration goals" on page 5-9?**
  - **What is meant by "reshape and guide the river channel" as stated on page 5-9?**
  - **The statement to "reshape and guide the river channel" (page 5-9) appears to be in conflict with the statement on page 5-5, "*The Proposed Action would provide a small level of assistance in training of the river and creating a new thalweg (i.e. line of lowest elevation within a watercourse); however, the channel would determine its own course based on water volume and velocity*." USEPA does not support efforts to establish a new river thalweg. The river should be left to establish its own new natural path post-dam removal.**
  - **USEPA does not support placement of 28,000 cubic yards of concrete rubble or other "clean fill" as proposed in the Draft EIS. There is no justification for placement of this material within the river channel.**

- The Draft EIS (Phase 3A) on page 3-6 describes "Bank stabilization/planting/stream work." However, the narrative that follows does not discuss any bank stabilization, plantings, or stream work.
  Recommendation: In the Final EIS, narrative information for Phase 3A should be updated to describe any proposed bank stabilization efforts, the linear footage of proposed stabilization, and the type of stabilization, plantings, and work to be implemented. Reference to figures (either in the Final EIS or appendices) showing this work should be included. Plant lists for proposed plantings should be included. Additionally, USEPA supports the use of non-hard-armoring bank stabilization methods.

MITIGATION AND ADAPTIVE MANAGEMENT

- As no formal mitigation was proposed in the Draft EIS, there was no information provided on mitigation and adaptive management post-dam-removal.
  Recommendation: The Final EIS should include a monitoring and adaptive management plan. The plan should include a description of proposed monitoring activities at wetland development sites upstream of the dam and any formal mitigation sites, including quantifiable and measureable success criteria for all ecosystem restoration work, and should specify the length of the monitoring period(s). Additional information on the party(ies) who will maintain mitigation/restoration sites in perpetuity should also be included.

WATER QUALITY

- The Sandusky River is listed as impaired[7] (i.e., not meeting state water quality standards) on the OEPA Clean Water Act Section 303(d) list of impaired waterbodies. However, the Draft EIS did not include a discussion of 303(d)-listed impairments, nor did it include a discussion of implications to water quality for proposed impacts to 303(d)-listed waterbodies or to waterbodies upstream of a 303(d)-listed waterbody.
  Recommendation: The Final EIS should provide information on the current impairments listed for the Sandusky River, and describe how implementation of the proposed project could potentially affect the waterbody (with regard to specific listed impairments).

- The Draft EIS (page 1-10) states, "*Within the project area, the Sandusky River's Aquatic Life Use Standard is Warm Water Habitat (WWH). The Sandusky River was sampled at five locations between river mile (RM) 5.5 and 18.05 in 2009. The Sandusky River at the Ballville Dam (RM 18.05) was found to be in non-attainment of the WWH designation due to siltation and direct habitat alteration.*" However, the Draft EIS did not speak to how removal of the dam could or would modify aquatic life use water quality standards.
  Recommendation: The Final EIS should provide additional information on how implementation of the proposed project could potentially affect aquatic life use standards in this portion of the Sandusky River.

[7] Including flow alteration(s), habitat alterations, nutrients (nitrate), polychlorinated biphenyls ([PCBs] in fish tissue), and sediment (sedimentation).

THREATENED AND ENDANGERED SPECIES

- The Draft EIS on page 5-46 states, "*Due to project schedule, clearing of 0.25 acres for the south workpad is expected to occur in September. During this time, Indiana bats could be migrating through the project area and using areas of suitable wooded habitat for roosting and/or foraging. In order to avoid direct effects to Indiana bats from removal of 0.25 acres of forest habitat during the migration period, the following actions will be taken: (1) a habitat assessment of the 0.25 acre area of tree clearing would be completed to identify any potential roost trees and assess the quality of the habitat for foraging; (2) if potential roost tree(s) exist, an emergence survey would be conducted, following Service protocol, to determine if bats are using the tree(s) for roosting; (3) if no bats are detected emerging from the tree(s), the tree(s) would be cut the day following the second night of survey; (4) if a bat(s) is detected emerging from the tree the tree would not be cut. Emergence surveys would be repeated until two consecutive nights without any bat emergence are documented. Then the tree(s) would be cut the day following the second night of survey. This would avoid direct effects to Indiana bats from removal of roost trees.*" **Recommendation: USEPA requests that the Final EIS include language duplicating these efforts [to avoid impacts to the Indiana bat] for the Northern Long-Eared bat.**

- The Northern Long-Eared bat is proposed for listing under the Endangered Species Act (ESA) by USFWS. This bat utilizes forested habitat and may occur within portions of the project area, as 107.9 acres of potential habitat for this species exists within the project area. The Draft EIS indicates on page 4-28 that the Ballville Dam project area has not been surveyed for the Northern Long-Eared bat. While tree cutting on the north side of the river will adhere to seasonal restrictions (no tree cutting between April 1 and October 1) to avoid direct impacts to bats and breeding birds, development of the south workpad proposes clearing of 0.25 acre before October 1st.

  Recommendations: Following language in the Draft EIS to protect the Indiana bat, USEPA recommends that USFWS commit to the following in the Final EIS to protect the Northern Long-Eared bat:
  - **Coordinating all tree removal scheduled before October 1 with ODNR; and**
  - **Assessing habitat and undertaking bat surveys (i.e. emergence counts) before tree clearing. In order to ensure no harm to wildlife, felling of trees over 7 inches diameter at breast height (DBH) should be undertaken after two nights of consecutive surveys showing no bat emergence from that specific tree (as per protocol discussed for the Indiana bat on page 5-46 of the Draft EIS).**

HISTORIC PRESERVATION

- USFWS has determined that removal of the Ballville dam would have an adverse effect on the dam but not on the adjacent former hydroelectric plant. The Proposed Action would permanently remove the dam, thus removing it from eligibility for listing on the National Register for Historic Places. Due to the permanency of the action, this adverse effect is considered a significant impact. The Draft EIS states on page 2-25, "*A Programmatic Agreement [PA] between the Ohio Historic Preservation Office [OHPO], the [U.S. Fish and Wildlife] Service, and the Consulting Parties is currently being developed.*" A draft of this PA was included in appendices to the Draft EIS.

  Recommendation: The Final EIS should include copies of correspondence sent to and received from the OHPO since the publication of the Draft EIS, with updates on the status of the PA provided. Information on the status of mitigation development for the adverse effect should also be included.

VEGETATION AND WILDLIFE HABITAT

- Approximately 0.25 acre of tree removal is proposed adjacent to the Sandusky River to create access to the south abutment (Phase 1A), along with 0.30 acre of tree removal to construct the northern access ramp to the dam (Phase 2B). Forested impacts appear to be slightly over 0.50 acre total. Page 6-13 of the Draft EIS states, "*...the 0.5 acres of forested area would in part be seeded and returned to a natural state post construction, although would not be readily returned to forested area.*" The Draft EIS was unclear on why these areas could not be replanted to forested area.
  Recommendation: The Final EIS should include a commitment to reforest all forested areas proposed to be cleared, using trees native to northwest Ohio.

- The Draft EIS states on page 3-3 and 3-4 that as a result of the Phase 1 south notching of the dam, approximately 20 acres of sediment currently inundated by the impoundment would be exposed, and that "an approved mixture of seed would be broadcast across the exposed surface then mulched to prevent sediment erosion and seed desiccation." However, a plant list was not provided in the Draft EIS or appendices.
  Recommendation: The Final EIS should include a plant list proposed for seeding of exposed areas upstream of the dam. The list should include species common name, Latin name, wetland indicator status, and broadcast rate.

SEDIMENTS AND SEDIMENT RELEASE

- The Draft EIS did not discuss testing of the sediments impounded behind the Ballville Dam. No discussion was provided on how a decision was made to release sediments downstream versus excavate them for beneficial reuse or for proper upland disposal.
  Recommendation: The Final EIS should include additional information on sediment testing and how the determination to flush sediment downstream (versus removing it) was made.

PROJECT CLARIFICATION AND ADDITIONAL INFORMATION

- Temporary access roads are proposed to be constructed on both the north and south sides of the river. Page 5-58 of the Draft EIS states that the areas disturbed to construct temporary access roads will be re-graded and reseeded. However, areas to be deforested are not proposed to be reforested as part of restoration efforts.
  Recommendations: The Final EIS should confirm that all areas where temporary access roads will be constructed will be re-graded back to original grade, reseeded with native vegetation, and replanted with trees (in areas where trees will be removed).

- The Draft EIS was not clear on the final disposal locations for both bedrock removed for ICS installation as well as concrete removed from dam removal and seawall deconstruction. A small amount of concrete debris (1,900 cubic yards) from dam demolition will be directed to fall into two scour holes located downstream of the south spillway and north overflow. Page 3-6 of the Draft EIS suggests that the rest of the concrete rubble (28,000 cubic yards) may be utilized to grade a channel lead starting 300 feet upstream of the dam[8]. However, the Draft EIS is not conclusive that this is necessary.

[8] Which USEPA does not support; see comments on Page 5.

<u>Recommendation</u>: The Final EIS should identify the final disposal location for all waste (including bedrock and concrete) to be disposed offsite. The Final EIS should also provide assurances that no waste streams will be disposed of in other Waters of the United States.

- The Draft EIS referenced general topics and concerns identified during the scoping process, but did not include specific scoping comment letters and emails received or formal responses provided to any of the recommendations.
  <u>Recommendation:</u> The Final EIS should include an appendix with all comment letters and emails received from all agencies, entities, and individuals, and provide direct, specific line-by-line responses to comments and recommendations received on the Draft EIS. The Final EIS should also include an appendix that contains copies of correspondence sent to and received from any other state or Federal agencies regarding the project.

USEPA appreciates the opportunity to review this Draft EIS. We are available to discuss our comments with you in further detail if requested. If you have any questions or comments regarding the content of this letter, please contact Ms. Liz Pelloso, PWS, of my staff at 312-886-7425 or via email at pelloso.elizabeth@epa.gov.

Sincerely,

Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Enforcement and Compliance Assurance

Enclosure: Summary of Rating Definitions

cc: Jim Ellis, Mayor of Fremont
Gary Harsanye, ODNR-Engineering
Becky Jenkins, ODNR-Wildlife
Christina Kuchle, ODNR-Scenic Rivers
Joseph Krawczyk, USACE-Buffalo District (LRB-2011-00046)
Dave Snyder, OHPO
Heather Allamon, OEPA-NWDO

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION[1]

Environmental Impact of the Action

LO - Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

EO - Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1 - Adequate

The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alterative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - Insufficient Information

The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3 - Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

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[1] From EPA Manual 1640: Policy and Procedures for the Review of the Federal Actions Impacting the Environment